

The Emergence of Minimalist Phones

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Not So “Smart” Phones

Those who practice a minimalist lifestyle vow to strip away the unnecessary flourishes of their life and focus on what matters most. What if this philosophy were applied to the phones we use? This paper examines the implications of the emergence of “minimalist phones” as an alternative to smart phones. Around the turn of the 21st century, the invention of the smartphone revolutionized how people communicate with each other. This started in 1992 when IBM released the Simon Personal Communicator, which would later be regarded as the first smartphone (Staff, 2021). A touch screen, access to emails and cellular pages, and other features such as a calendar and calculator signified that this phone was indeed smart compared to its cellular predecessors. Only about a decade later, in 2007, the iPhone was released. With ability to store music, browse the web, and use GPS, Apple had created an even smarter phone, one that would see hundreds of millions of users in only a couple years after its release (Statista, 2021).

According to Pew Research (Pew Research Center, 2021), 35% of Americans said they used a smartphone in 2011. By 2021, that number had risen to 85%. In a world dominated by remote communication, the need for a smartphone has never been greater. However, this constant connectivity has not come without drawbacks. As more people began using smartphones, scholars (and parents) began to observe its addictive properties (Bányai et al, 2017). With the worldwide web at one’s fingertips, it’s hard not to want to look at your phone! The popularity of social media, powered by the quick dopamine fix one gets when looking at an Instagram post or a TikTok, has only aided this addiction. Recognizing a market for people who resent the negative aspects of smartphones, in recent years, companies such as Mudita and The Light Phone have introduced a novel concept to the world of smart phones, the minimalist phone. These phones promise users the same connectivity as smartphones, being able to call,

text, and use some other essential functions like GPS. However, they get rid of everything else. The internet, apps, anything not essential to what a phone used to be, is what minimalist phones promise to do away with.

In many ways, minimalist phones are a return to the era when phone usage was dominated by flip phones and blackberries. However, these phones promise the same limited functionality in a much more aesthetic and modern package. For example, the Light Phone II has a sleek electronic paper screen, popular in many e-readers (Light Phone, 2021). Whether or not minimalist phones will become popular is yet to be seen. However, their emergence shows a trend that many people desire to be less connected, even after technology has advanced so much for the purpose of making us more connected.

A Deeper Dive Into Minimalist Phones

So, what exactly defines a minimalist phone? Well, there are many available on the market, but none of them are the same. The common theme between all of them is a simplified design and functionality. For example, take the Nokia 3310, re-released in 2017 almost 20 years after its original launch. The 3310 maintains the classic look of a brick phone, with a small screen and keypad. However, it is upgraded from the original, and has longer battery and talk life, as well as a new camera (Cook, 2017). It also has up to 32 GB memory with a microSD card, a microUSB connection, and runs on the Nokia OS (Nokia, n.d.).

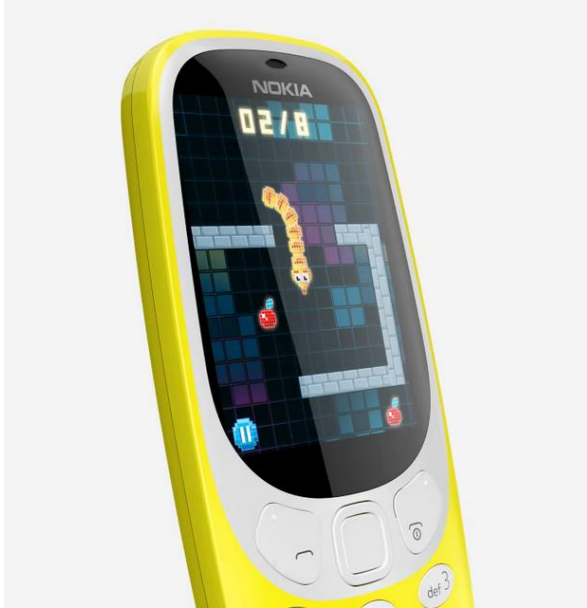


Figure 1: Nokia 3310 Snake Game. (Nokia, 2022)

Unlike other minimalist phones, it does offer apps such as Twitter and Facebook, albeit you have to navigate them with the 3310's miniscule directional pad. Additionally, as seen in Figure 1, you can play the classic snake game. This minimalist phone is not a new idea, however. It's a revamp of an existing phone marketed under a different context. Unlike the Light Phone and its predecessors, the Nokia 3310 does not offer a new look, instead playing on the nostalgia of its classic products combined with the motivation for minimalism in phones.

Next, I examined the Punkt MP02, a calculator-resembling phone released by Swiss company Punkt in 2018. As shown in Figure 2, the Punkt phone features an uncomplicated but aesthetically pleasing design that contains a small screen and a set of buttons. The MP02 fits very comfortably in the palm with a length of 4.6 inches and weighs only 100 grams. In terms of usability, the MP02 offers basic features such as calls, texts, calculator, contacts, and notes. It also is capable of sharing its 4G LTE connection with other Wi-Fi enabled devices such as

tablets and laptops (Punkt, n.d.). I think this feature makes the MP02 and other minimalist phones very attractive. Having the ability to connect to the internet and do necessary work on a laptop or tablet, but without the constant temptation of checking apps, seems like a good middle ground for an average consumer.



Figure 2: Punkt MP02, only has a variety of basic buttons. (Punkt, n.d.)

Finally, I examined a phone previously mentioned, the Light Phone II, released in 2018. Similar to the MP02, the Light Phone II comes in a small package at just 3.8 by 2.0 inches. One of its features that stands out immediately is the electronic paper screen, seen in Figure 3, that does not emit any traditional blue light like traditional screens (Light Phone, 2021). This basic but well-crafted look fits well with the overall theme of the Light Phone II; simplistic features in a satisfying package. On the website, the company promises that this phone is “designed to be

used as little as possible”. The Light Phone II offers simple basic features similar to the MP02; calls, texts, GPS, and a basic music feature. It also offers hotspot tethering.



Figure 3: Light Phone II Screen, features a nice backlit interface. (Light Phone, 2021).

An advantage that minimalist phones have is reduced environmental cost. A cool feature that the Light Phone II provides is the ability to “carbon offset” the phone at the point of sale (Light, 2021). This means that Light will promise to offset the amount of carbon wasted by the production of their own farm. Shown in Figure 4 are CO_2 equivalent amounts for different materials involved in the production of the Light Phone. A way they do this is by investing in carbon farming, essentially a process where there is a modification of farming methods that leads to a measurable increase in the amount of carbon stored in the soil (Light, 2021). Although the Light Phone II produces as much CO_2 as an iPhone, this move from the company allows users to

invest in an environmentally conscious product.

<input type="checkbox"/>	Impact Category	Life Cycle Phase	CO2 Equiv. (kg)	Light Phone I
1	Display Unit	Production	16.123	
2	PCB Rigid	Production	5.189	
3	PCB Flex	Production	1.671	
4	Elec. Components (IC)	Production	20.767	
5	Battery	Production	0.847	
<input type="checkbox"/>	Plastic Casing	Production	0.333	
7	Misc. Metals	Production	0.038	
8	Packaging	Production	0.222	
9	Charger	Production	0.219	
10	Rest of Device (Misc)	Production	0.012	
11	Light Phone Team Flights	Production	5.383	
19 records			Sum 60.675	

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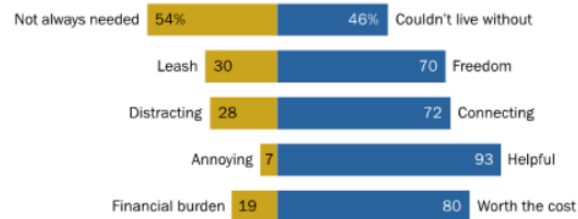
Figure 4: CO2 Equiv. Light Phone II (Light, 2021)

As you can see, minimalist phones come in varying sizes and shapes, and offer different features based on the company's preferences. However, all of them prioritize limited internet access, and get rid of all apps and widgets not deemed necessary. Generally, most of them are small, since video-streaming and game playing are not important. However, the most important feature of every minimalist phone is their *lack* of features. In order to encourage limited use of their phone, they make sure only to highlight the essentials. This promises that the users spend the least amount of time on their phone, and only use it when they need to. To analyze opinions on minimalist phones, I conducted a survey to determine what age groups would be most interested in this technology. I used pre-existing surveys from Pew Research to determine if the responses matched up with existing data. The first of these surveys illustrated how people feel

about their smartphone, the responses of which are shown below in Figure 5. I will be comparing these findings to my own survey later.

Despite Clear Benefits, 54% of Smartphone Owners Say Their Phone is “Not Always Needed”—but 46% Say it is Something They “Couldn’t Live Without”

% of smartphone owners who say that the following items from each pair best describe how they feel about their phone



Pew Research Center American Trends Panel survey, October 3-27 2014.
PEW RESEARCH CENTER

Figure 5: Pew Research Phone Survey (Smith, 2020)

Another survey I looked at from Pew shows an interesting correlation between income and smartphone usage, shown in Figure 6. Although this was not something I touched on in my survey, it could be a worthwhile question to research in the future.

% of U.S. adults who say they do not use broadband at home but own smartphones, by annual household income

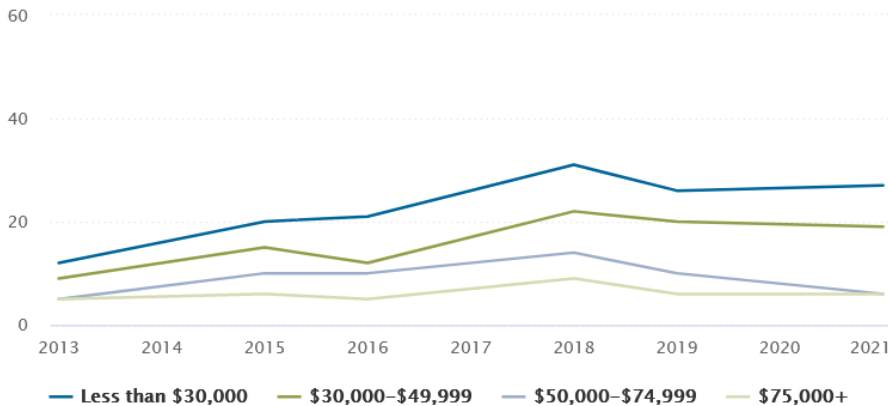


Figure 6: Percentage of Adults Dependent on Smartphones (Based on Income) (Pew, 2021)

Minimalist Phones From an SCOT Perspective

I analyzed minimalist phones using the Social Construction of Technology (SCOT) framework. This framework emphasizes the importance of social groups in how technology is shaped. It describes a push and pull relationship between the users and creators of technology (Bijker, 2012). Due to smartphones becoming so overpowering in our lives, there is some push for minimalist phones from the public. In response to this push, companies have begun making these products. In the future, users will respond to the initial wave of minimalist phones and cause them to change again. This push and pull dictates the development of this technology.

A major question that was answered is what social groups are driving the emergence of minimalist phones. We know that millennials are seeking better strategies to use technologies with more awareness of their addictive properties (Hameline, 2020). “Millenials” are generally referred to as people born in the 80’s and 90’s, and are the first generation to grow up with smartphones. It would make sense that many of them would become disillusioned with the technology they saw grow so rapidly. However, how do older people (40+) feel about minimalist phones? Would their experience of not growing up with a smartphone lead them to be more predisposed to owning a minimalist phone?

I used the concept of “interpretive flexibility” to analyze how this generation, and others, has influenced the development of minimalist phones. This concept gives importance to how artifacts are interpreted, but also to how they’re designed (Bijker, 2012). Using this idea, I answered how millennials attitudes towards standard smartphones influenced the production of minimalist phones and their design.

Getting user feedback from the survey was critical to my STS analysis. The survey gave me insight into the users of a technology- smartphones. Based on their responses, I concluded

what factors might drive someone to desire a minimalist phone. Additionally, the specific features that one might want to keep in a minimalist phone were extracted. By comparing these features to the features currently present on minimalist phones, I was able to determine my survey respondents line up with the general public in terms of feature prioritization for cellphones.

In addition, I sought out other social groups that may be interested in minimalist phones. While this product is not being marketed mainly to 20-something-year olds, I know there are people my age who share the same disillusionment with smartphones that millennials do. A question to research would be how older middle-aged and elderly people feel about the concept of minimalist phones. Using surveys as a research collection tool helped answer this question and gave good breakdowns of attitudes towards smartphones based on demographic outlines.

Phone Surveys

The focus of my STS paper was to explore the question- what does the development of minimalist phones says about our society's relationship with smartphones? Given that smartphones play a dominating role in many modern lives, this question is an important one to answer and could give insight into how society's relationship with technology will develop.

The data to analyze this question was collected with one method. A large survey on cell phone usage was conducted, drawing from different demographics to get a broader view of the society's interaction with the technology. Specifically, there was a wide range of age groups surveyed, drawing ideas from different generations that may or may not have grown up with smartphones. This survey contained questions about people's use of their cell phone (with actual time values), attitude towards their cell phone, and lead into questions about the concept of minimalist phones. Since some respondents were not familiar with this idea, I gave some

examples of minimalist phones so they could accurately make judgements. The main purpose of the survey was to determine how respondents viewed their own phone usage, and then to see if they were interested in a minimalist phone.

I drew conclusions from the initial phone usage data and drew correlations between that and if a respondent was interested in a minimal phone. For example, were respondents of a certain age group more likely to be interested in a minimalist phone? Were respondents who used their phone less often more likely to be interested? These were some of the conclusions I drew based on the data. I did not critique respondents for their “smart phone addiction” as this has been demonstrated to be a misleading framework for the discussion (Panova et al, 2018).

Results

Overview

Smartphones play a dominating role in modern life. I examined the question of what the development of minimalist says about our society’s relationship with smartphones. To collect data on this concept I created a survey and distributed it to as many people as possible. I distributed it to family members, friends, social groups, online communities, and pretty much anyone I could get to take the survey. This survey drew from different age groups to get a broader view of society’s interaction with the technology, trying to draw ideas from different generations that may or may not have grown up with smartphones. The survey contained questions about people’s use of their cell phone (with actual time values), attitude towards their cell phone, and lead into questions about the concept of minimalist phones. Since the respondents were most likely not familiar with this idea, I gave an example of a minimalist phone so they could accurately make judgements. The main purpose of the survey was to determine how respondents view their own phone usage, and then see if they would be interested

in a minimalist phone. Also, I added questions at the end of the survey to allow respondents to explain why they were interested or not interested in a minimalist phone.

Analysis

After analyzing the results of my survey, I concluded that older generations are more likely to be interested in minimalist phones than younger generations. However, the younger generations do wish to spend less time on their phone but are unwilling to sacrifice it for a minimalist phone. To interpret how minimalist phones are viewed by different age groups, I split up my respondents into 3 groups. The first group was from age 30 and younger (representing the younger generation, or “Gen Z”), the second group was from age 30 to 50 (representing the “millennial” generation), and the last group was from 50 up (representing “Gen X” and “baby boomers”). The group that displayed the most interest in minimalist phones was the Gen X group, with 42% of this portion indicating they would be interested in a minimalist phone. The millennial group showed similar statistics to Gen Z, with 27% of respondents indicating an interest in minimalist phones. Despite 76% of respondents in the Gen Z group indicating they wish they spent less time on their phone, only 28% of this group said they were interested in a minimalist phone. This shows us that although younger generations have the motivation to detox from their smartphone, they are not willing to change their habits for a minimalist phone. They interpret their phone as something used too much, but also as something with utility that they’re not willing to give up. This is most likely due to their phone usage being the highest among all groups, with an average of 4.4 hours spent on their phone each day. 52.6% of millennials said they wished they spent less time on their phone as well. Millennials and Gen X spent 2.5 and 2.6 hours a day on their phone, respectively.

My survey had 125 respondents, ranging from age 13 to 84. The average age of respondents was 38. Among the respondents, only 2 said they did not use a smartphone. Shown below are the distributions for minimalist phone interest based on age. These charts were in response to the survey question, "Would you be open to the idea of having a "minimalist phone?" As stated above, these phones contain only basic functionalities such as calling, texting, music, Wi-Fi tethering, and some other widgets (it cannot use the internet). For example, the Light Phone II is shown below, as you can see it has a simplistic but tasteful design."

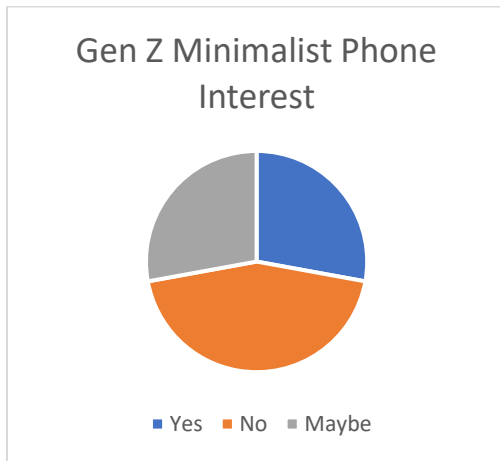


Figure 7: Gen Z Minimalist Phone Interest (created by Humphreys, 2022)

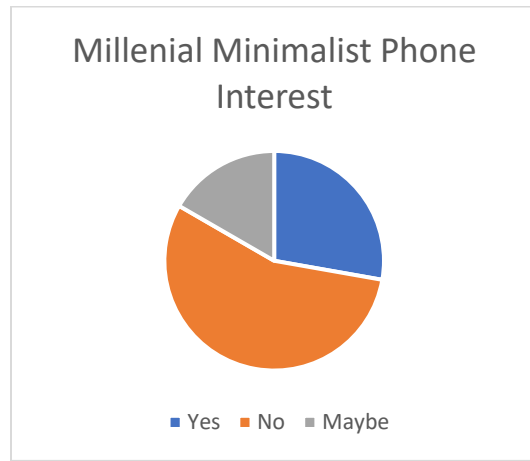


Figure 8: Millennial Minimalist Phone Interest (created by Humphreys, 2022)

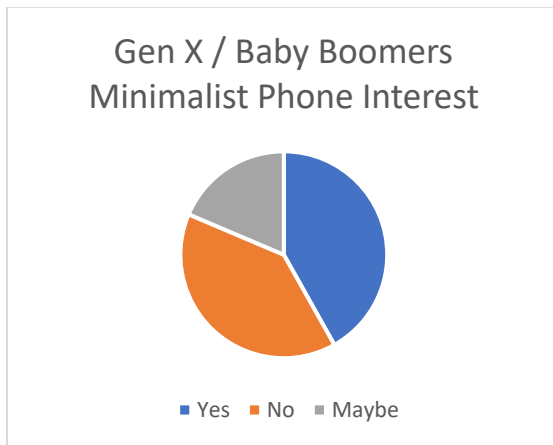


Figure 9: Gen X/ Baby Boomers Minimalist Phone Interest (created by Humphreys, 2022)

Another key takeaway from the survey was the reason behind interest in minimalist phones. I provided a host of responses for people to indicate why they were or were not interested in a smartphone. The results of the first question are shown in Figure 10.

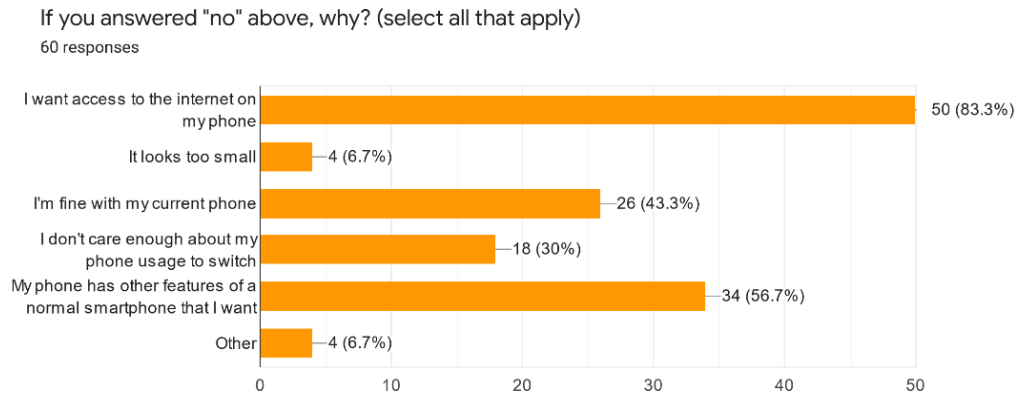


Figure 10: Minimalist Phone "Not Interested" Responses (created by Humphreys, 2022)

It's clear that the number one problem many people have with minimalist phones is that they don't have access to internet. This is an indispensable feature for many smartphone users. No access to the internet also means no social media, email, music streaming, and watching videos. Another question in the survey aimed to find what activities people spent the most time on, the results of which are shown below. Messaging was the most frequency activity, with social media, music streaming, and email following. Based on these activities being prioritized, as well as checking the news and banking, it makes sense that many people would refuse a phone that doesn't have access to the internet.

What activities on your phone do you spend the most time on? (choose 3)

121 responses

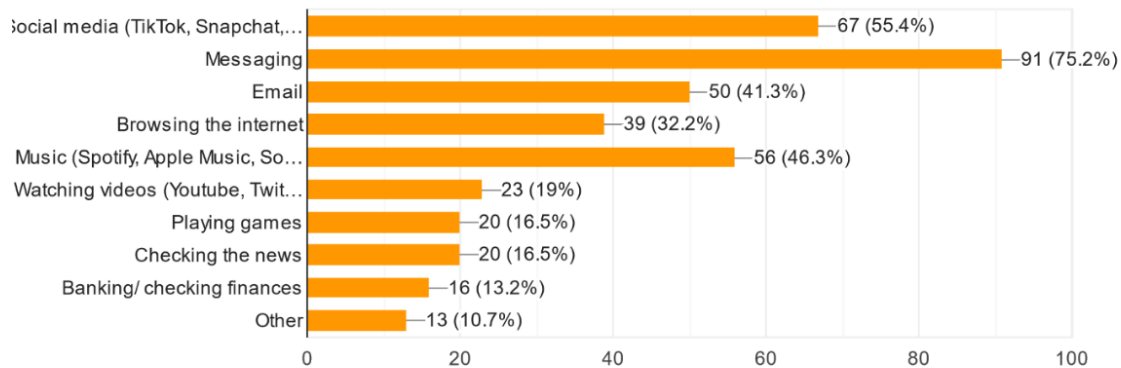


Figure 11: Phone Activity Usage (created by Humphreys, 2022)

Unfortunately for minimalist phone creators, providing access to the internet on their phones would be a departure from the purpose of these phones. The question for these companies is, do they sacrifice the principle of the minimalist phones to attract more users? The Social Construction of Technology framework says that technology is influenced by groups that use it. Clearly users have issues with the lack of internet on minimalist phones, but it's up to the producers to determine if these changes are worth making. Another issue the respondents had with minimalist phones is that their smartphones have other features that they want. Some of these features could be the camera, flashlight, weather, and other widgets commonly available in smartphones. Analyzing the opposite side, the responses for people who indicated interest in minimalist phones is shown below.

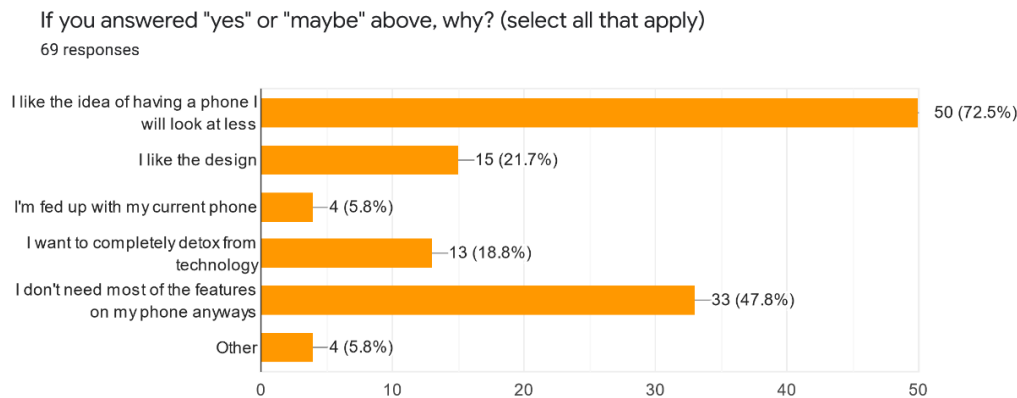


Figure 12: Minimalist Phone “Interested” Responses (created by Humphreys, 2022)

As you can see, the most popular response was that people liked the idea of having a phone they would look at less. Additionally, many respondents indicated they didn’t need most of the features of their phone anyways. So, the main selling point for minimalist phone creators is echoed in some people’s thoughts towards their phone use. Although this doesn’t mean there’s a significant market interest, it does indicate that people’s attitudes towards smartphones are changing.

Discussion

According to the article from Pew Research (Smith, 2020), 54% of smartphone users said that their phone is “not always needed.” However, 46% of respondents said their smartphone was something they “couldn’t live without.” This somewhat even split is in line with my findings, as 44.3% of respondents of my survey said they weren’t interested in a minimalist phone, and 32.8% said they were. This split demonstrates the “interpretive flexibility” of smartphones, where users view their phone differently based on their relationship with it. This aspect of smartphones is what allowed for the invention of minimalist phones, as some users began to desire a phone with less features. Keep in mind, indicating that their phone is not always needed does not mean someone would be interested in a minimalist phone, however judging from the

responses of people who indicated an interest in minimalist phones, the capacity to “not always need” a phone is in line with liking the idea of having a phone less. The other responses in that Pew poll don’t directly connect to my questions, but they do indicate that people have a generally positive attitude toward their phone. My survey would go against this notion, given that 54.5% of respondents indicated they wished they spent less time on their phone.

A limitation of my data collection method was that it does not measure concrete interest in minimalist phones. As I mentioned before, indicating that someone would be “interested” in a minimalist phone doesn’t mean they would buy it. Because of this limitation, it’s hard to know for sure what demographics are most likely to purchase minimalist phones. Also, the concept of liking the “idea” of looking at a phone could be misconstrued by respondents. It is quite possible for someone to like the idea of something but not the thing itself. Another limitation of my survey was that it did not measure socioeconomic status of the respondents. It would be very interesting to have this data, given that many low income people are more dependent on smartphones, for things such as job applications (Pew, 2021).

If I were to redo this research in the future, I would try to give a wider range of demographics on the survey. As stated above, getting a distribution of income levels would be useful information. Also, measuring smart phone usage based on education level would be interesting. Do college educated people use their smartphone less or more than their less educated peers? I would also try to use more methods of data collection, such as interviews. Getting opinions of experts in the field of smartphone research such as sociologists and statisticians would give me value extra opinions from which I could draw conclusions.

Going forward, I will keep in mind the differences of opinion on minimalist phones in my engineering endeavors. While there are many people I know who share a kind of resentment

towards their smartphone, this survey showed me that many people are fine with their cell phone usage. That's totally fine as well, just something for me to keep in mind. I will continue to track the development of this technology and gain insight on how people feel about it. Perhaps if I get a job in hardware or embedded engineering (which I am hoping will happen), I will someday work on the design of a minimalist phone.

Conclusion

As we have learned, the age group most interested in minimalist is people over the age of 50. This is most likely since they are less dependent on their phones as younger generations, evidenced by their daily usage statistics. However, the younger generations (millennials included) do share a desire to look at their phone less. This is where the interest in minimalist phones came from and led to a market emergence of them. The most popular response to why people wanted a minimalist phone was that they desired to look at their phone less. However, due to the younger generations heavy use of social media and phones in general, they are less willing to sacrifice their connectivity for the simplicity of a minimalist phone. Some of the major reasons people were unwilling to want a minimalist phone was that it did not provide access to the internet and other features of a normal smartphone. It will be interesting to see if minimalist phone companies provide products with internet access due to this being an essential feature for many users. Also worth noting is the fact that many minimalist phones provide Wi-Fi hotspots, so users can surf the internet on other devices but not the phone itself. The utility and necessity of smartphones ensures that they will not go away anytime soon. However, it is clear from these findings that people are aware of the dangers of their smartphone usage and desire to use them less.

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Appendix A: List of Survey Questions

1. What's your name?
2. How old are you?
3. Do you own a smartphone?
4. How many hours a day (on average) do you spend on your phone?
5. What activities on your phone do you spend the most time on? (choose 3)
6. Do you wish you spent less time on your phone?
7. Do you impulsively check your phone?
8. Of all the functionalities of your phone, which do you care about LEAST? (pick 2)
9. Of all the functionalities of your phone, which do you care about MOST? (pick 2)
10. Would you be open to the idea of having a "minimalist phone?" As stated above, these phones contain only basic functionalities such as calling, texting, music, Wi-Fi tethering, and some other widgets (it cannot use the internet). For example, the Light Phone II is shown below, as you can see it has a simplistic but tasteful design.
11. If you answered "no" above, why? (select all that apply)
12. If you answered "yes" or "maybe" above, why? (select all that apply)